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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,511	03/12/2004	Tomoaki Hiwatashi	Q80390	6398

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EXAMINER	
ASINOVSKY, OLGA	

ART UNIT	PAPER NUMBER
1711	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/798,511	HIWATASHI ET AL.	
	Examiner	Art Unit	
	Olga Asinovsky	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4 and 7-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4 and 7-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/29/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/28/2007 has been entered.

Applicants amend claim 1 by including that "at least one block formed by hydrolysis, quaternization or amine-oxide-forming treatment after polymerization."

Applicants filed new IDS.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 4 and 7-38 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 4-33 of copending Application No. 11/693,524. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 6 of copending Application No. 11.693,524 recites "at least one block formed by post-treatment after polymerization" such that that "at least one block" is readable in the present amended claim 1 wherein "at least one block formed by hydrolysis, quaternization or amine-oxide-forming treatment after polymerization" from the claim 1 of the present application No. 10/798,511. It would have been obvious to one of ordinary skill in the art to consider that the block segment having a hydrophilic group claimed under Markush group practice can be selected for being the same in both applications.

4. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 4, 7-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al U.S. Patent 6,838,078 or Hiwatashi et al U.S. Patent 6,375,932. The issue of the claimed invention is a block copolymer having straight chain wherein at least one block unit is formed from a monomer having hydrophilic group selected from the groups under Markush group practice; and at least one block formed by hydrolysis, quaternization or amine-oxide forming treatment after polymerization; and wherein the resulting block copolymer can be used for a cosmetic utility. Any claimed block unit comprising an anionic group or a cationic group, or nonionic group, or an amphoteric ionic group, or a semipolar group works within the adequate expectation for being a polymerizable monomer having hydrophilic moiety.

Wang discloses a film-forming composition for a cosmetic utility. A composition comprises a water-soluble or water-dispersible vinyl polymer, column 1, lines 65-67 and column 2, line 1, for the present claims 9 and 33. The term polymer includes random copolymer, block copolymer or sequential copolymer, column 4, lines 27-28. The term block copolymer is readable in the present claim 1. The block copolymer is formed by vinyl polymerization under conventional free radical polymerization method, column 4, line 33 and column 13, line 42-53. The film forming polymer composition includes both hydrophilic and hydrophobic moieties, column 7, lines 16-21. One of the hydrophilic monomer is an amine-group containing monomer. The monoethylenically unsaturated amine group-containing monomers having formulae (I) or (II) at column 8, lines 35-40 are readable for being at least one unit of formula (2) or formula (3) in the present claim

4, see also column 9, lines 20-41. The amine-group containing monomer provides hydrophilic character to the polymer, column 9, lines 32-33. Other non-amine group-containing hydrophilic monomers may be used to prepare the film-forming polymer and provide water-solubility, column 9, lines 34-38. The claimed N-vinylpyrrolidone can be selected, column 9, line 38, for the present claim 16. The film forming composition comprising a block copolymer and having straight-chain configuration is readable in the present claims, column 4, lines 33-34; column 9, line 61. Combinations of the amine group-containing monomers with long chain monomers are preferred to control the Tg of the polymer system, column 11, lines 5-18, for the present claims 36. The composition comprises at least one copolymerizable hydrophobic monoethylenically unsaturated alkyl (meth)acrylic monomer having formula (III). The monomer such as 2-ethylhexyl acrylate, column 10, line 25 and 49, is readable in the present claim 29. To facilitate hydrophilic nature of the resulting composition the organic acid buffer such as hydroxycarboxylic acid and/or mono-carboxylic acid can be employed, column 21, lines 22 and 60, for the present claim 14. Wang discloses that preferred film forming polymers are formed from at least amine group-containing monomers, long chain (meth)acrylic monomers, and short chain (meth)acrylic monomers, column 11, lines 48-50. The most preferred monoethylenically unsaturated amine group-containing monomers from which the film-forming polymer are formed are quaternary ammonium and amine-oxide group-containing monomers. If desired, the tertiary amine group-containing monomers can be converted to protonated tertiary amine groups, amine oxide groups, or quaternary ammonium groups prior to or after polymerization, column

7, lines 55-62, for the present claim 1. Any additional surfactant(s) such polyalkoxylated nonionic surfactant, column 16, line 55 and column 17, lines 52; amphoteric surfactant, column 17, line 62 and column 18, lines 1-46; anionic surfactants, column 18, lines 49-67; phosphates anionic surfactants, column 19, lines 31-48; amine oxides anionic surfactants, column 19, line 54 can be included. Silicone copolyol surfactants can be present, column 24, lines 1-12, for the present claim 23. Amine oxides anionic surfactants can also be present, column 19, lines 50-67, for the present claim 1, after polymerization. Combinations of various surfactants can be used if desired, column 20, lines 1-29, for the present claims.

Wang does not disclose at least two Tg of the film forming polymers for the present claim 1. However, it would have been obvious to one of ordinary skill in the art to consider that a film forming composition would have at least two different glass transition points because Wang clearly discloses that the chemical formulation of the film forming composition includes at least two different polymers.

Wang does not disclose a Young modulus property for the present claims 11-12. It would have been obvious to one of ordinary skill in the art to consider that a Young modulus property for the present claims 11-12 can be obtained in Wang invention because Wang discloses the film forming polymers that are readable in the present claims, and, since the same chemical formulation would possess to the analogous property.

Hiwatashi et al ' 6,375,932 have been considered in the office action mailed on 04/06/2005. Hiwatashi is available reference.

Hiwatashi discloses a cosmetic composition comprising film-forming polymers having at least two polymeric units including hydrophilic and hydrophobic units. The film forming polymers include amine-oxide-containing polymer (A) wherein the amine-oxide-containing monomers of the formulas (I) to (IV) are readable in the present claim 22, column 4 to column 6. The hydrophobic monomer (B) includes alkyl (meth)acrylate, column 7, lines 44-67 and column 8, lines 1-24. Any additional nonionic polymer=surfactant, cationic polymer=surfactant, an anionic polymer=surfactant, amphoteric polymers=surfactants, and any combination of said surfactants can be added to control the viscosity, Tg and pH degree. In the working examples the amine-oxide formation is observed after polymerization, column 15, line 45, for the present claim 1. Hiwatashi does not name "block copolymer" having straight-chain for the present claim 1. However, it would have been obvious to one of ordinary skill in the art to consider that a hair cosmetic composition comprising analogous chemical ingredients is a block copolymer because reference discloses hydrophilic unit and hydrophobic unit having different glass transition temperature, and reference discloses that alkyl group can include long chain up to C24 carbon atoms and the chain length is controlled by the polymerization process condition as evidence for straight-chain configuration. Hiwatashi does not disclose a Young modulus property for the present claims 11-12. Since the analogous chemical formulation of the cosmetic composition is readable in Hiwatashi invention, the claimed Young modulus properties can be obtained, because Young modulus properties depending on the viscosity, molecular weight of the polymers and the desired hydrophilic/hydrophobic balance of the polymers.

7. Claims 1, 4 and 7-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matyjaszewski et al U.S. Patent 5,807,937 in view of Hayama et al U.S. Patent 6,123,933.

8. Matyjaszewski and Hayama inventions have been considered in the previous office actions.

Matyjaszewski does disclose block copolymer structure comprising hydrophilic and hydrophobic units. The claimed straight-chain structure is inherent since reference discloses controlled polymerization condition to control chain length and molecular weight of the polymers with the predicted molecular weight, column 11, lines 65-67 and column 12, lines 33-41.

Hayama discloses a variety of amine-oxide-containing water-soluble resins, column 2, lines 44-67 and column 3, lines 17-67. The known surfactant such as anionic, amphoteric and nonionic surfactants can be added to control hair setting property, column 11, lines 12-13. The formation an amine-oxide group in the end of the resulting polymer was confirmed, column 14, lines 9-13.

Hayama does not use phrase "straight-chain block copolymer structure." However, the chain length is controlled by the polymerization condition. The chemical formulation of hair cosmetic composition includes at least two different polymers having different solubility in water. Thus, at least two different Tg points is inherent to the resulting composition in Hayama invention.

It would have been obvious to one of ordinary skill in the art to modify a block copolymer in Matyjaszewski invention by employing an additional surfactant and/or an amine-

oxide-group containing monomer disclosed in Hayama invention for the purposes to control the viscosity, solubility and the desired properties for a hair cosmetic composition, because any additional ingredient and/or surfactant would be expected for formulation cosmetic composition in Matyjaszewski invention.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art is relevant to show the state of the art knowledge.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

O. A

May 31, 2007

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